Fig.1

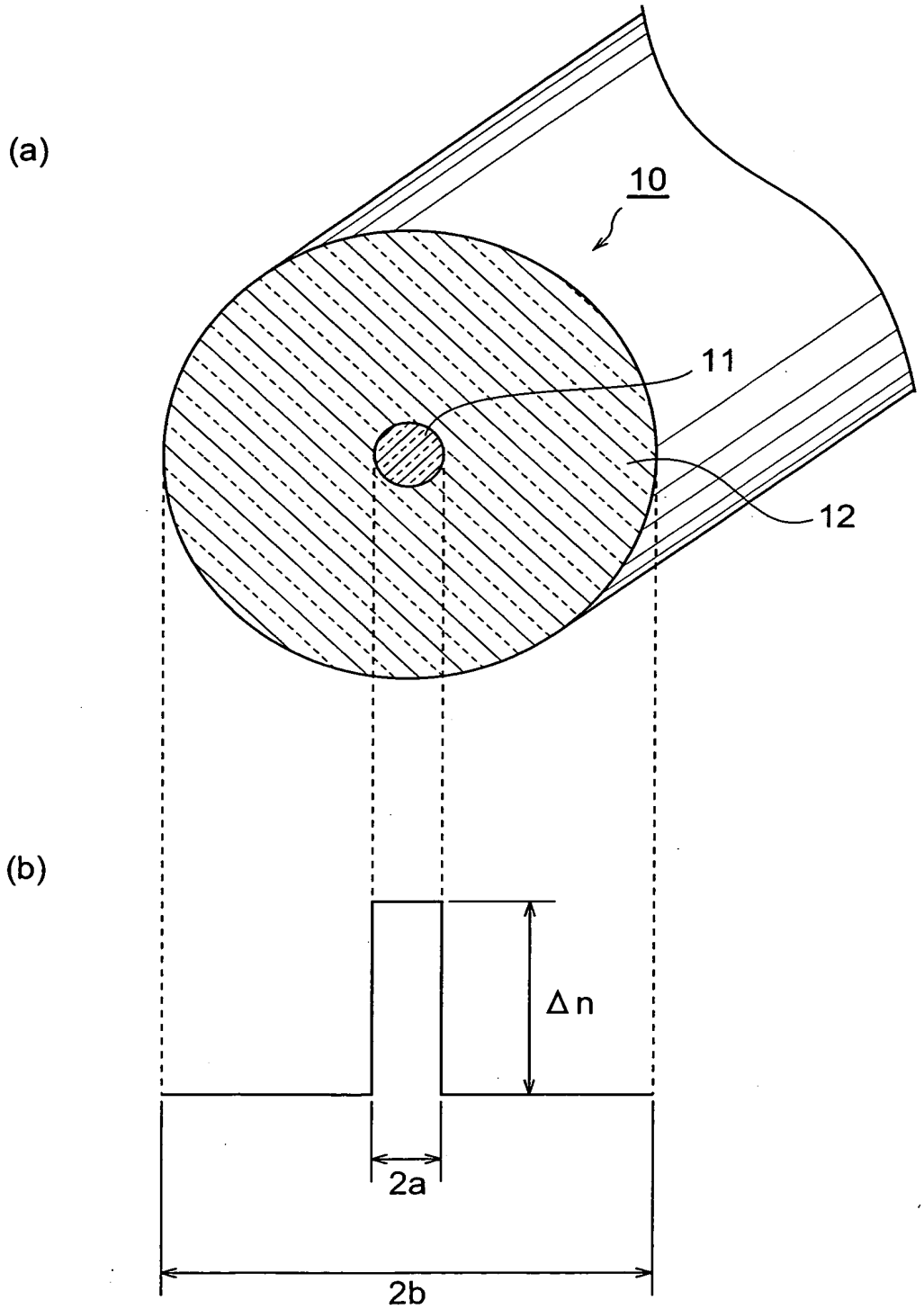

Fig.2

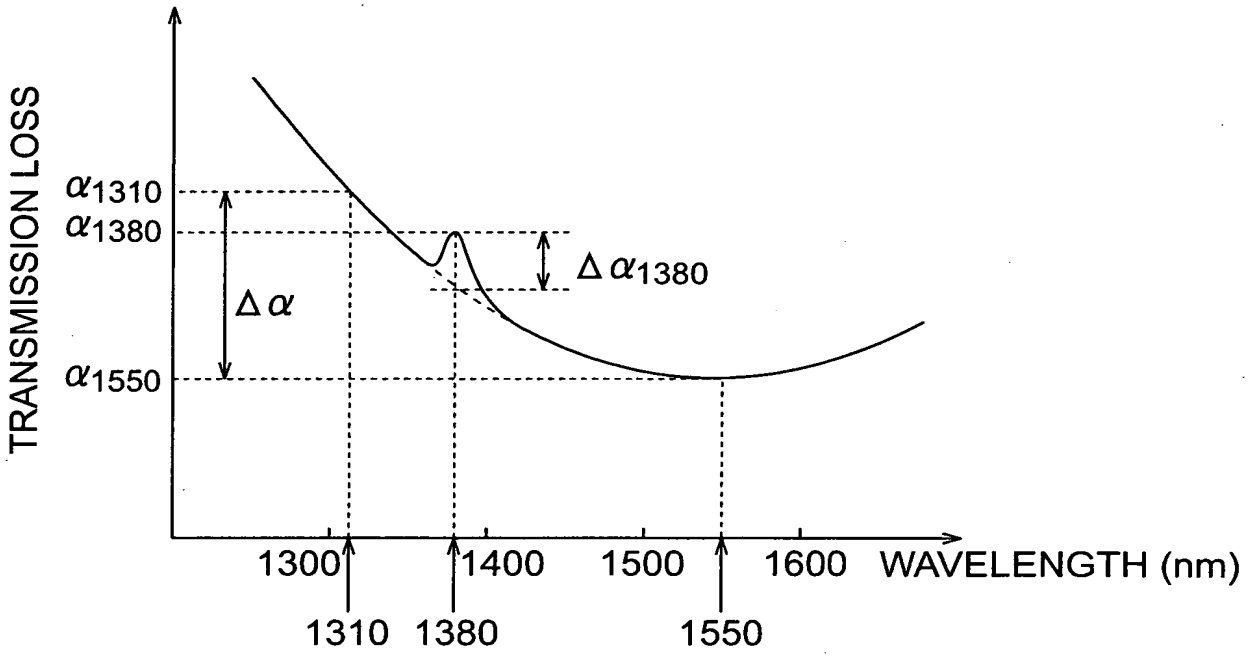
TRANSMISSION LOSS
α_{1310}
α_{1380}
α_{1550}
$\Delta\alpha$
$\Delta\alpha_{1380}$
1300
1400
1500
1600
WAVELENGTH (nm)
1310
1380
1550

Fig.3

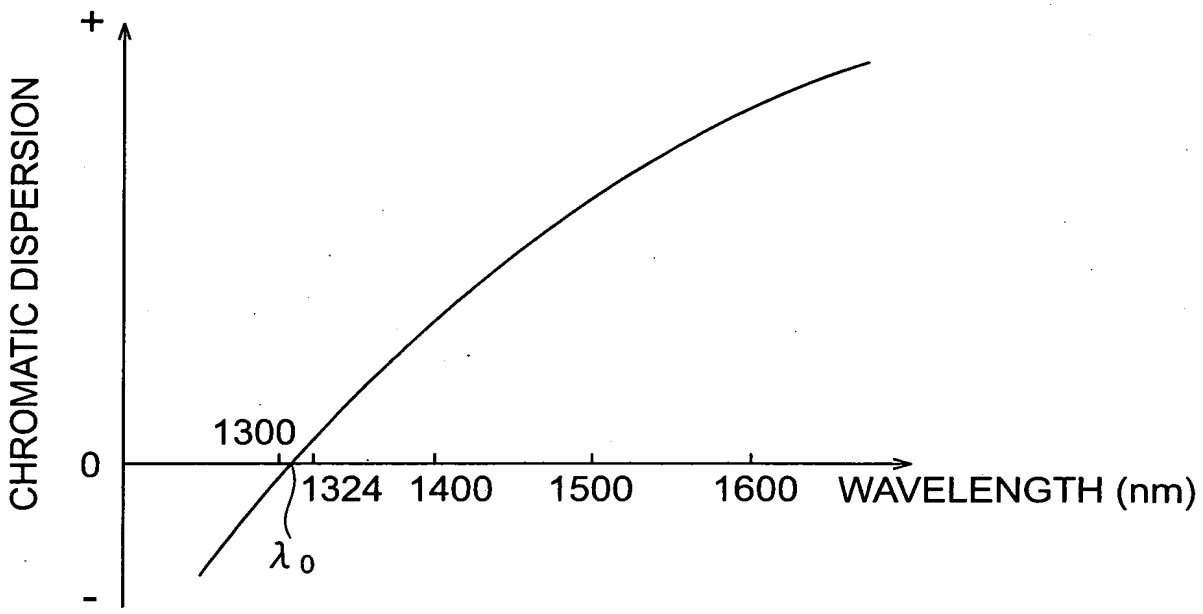
+
CHROMATIC DISPERSION
0
-
1300
1324
1400
1500
1600
WAVELENGTH (nm)
λ 0

Fig.4

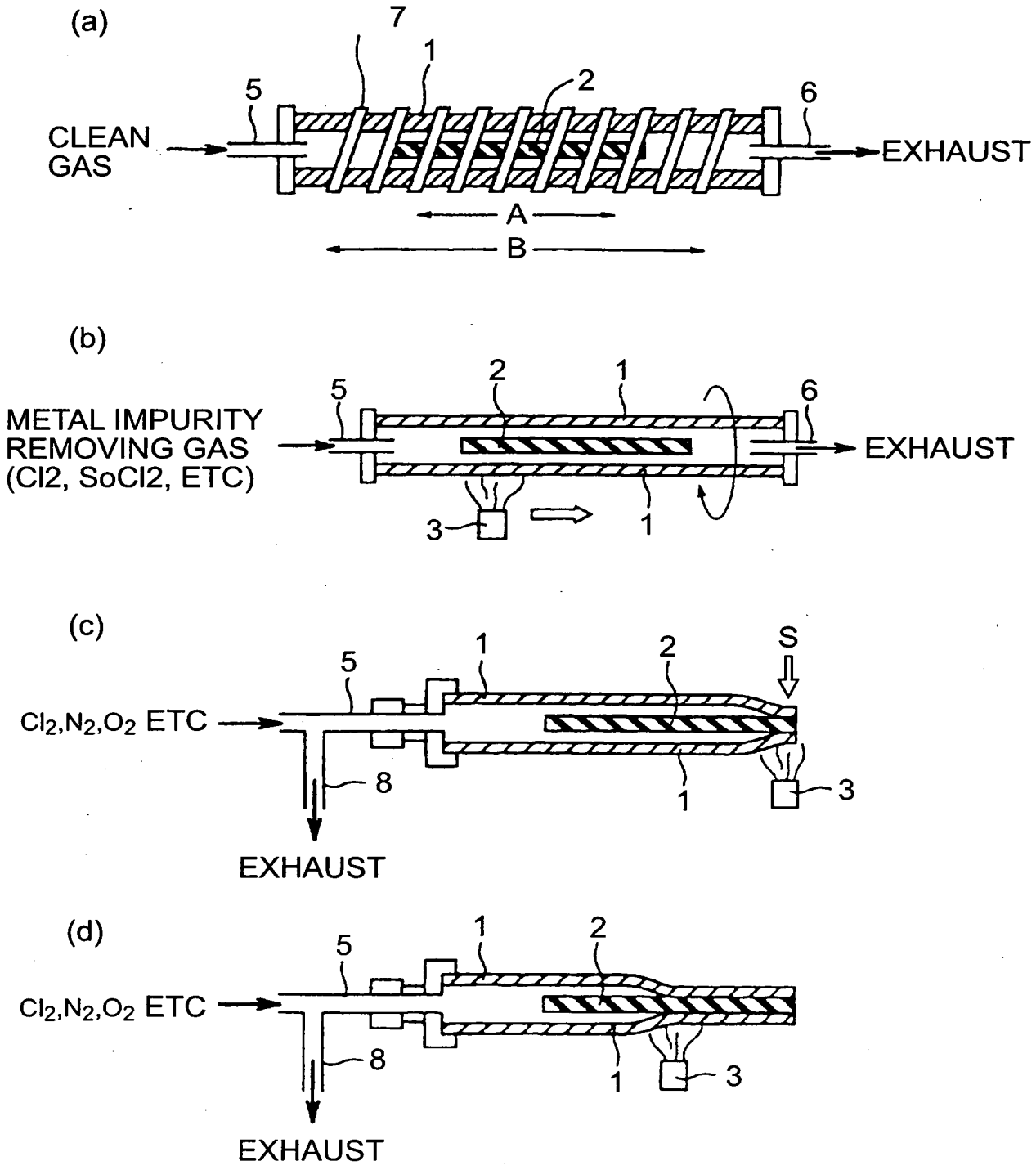
(a)
7
1
2
5
6
CLEAN GAS
EXHAUST
A
B
(b)
2
1
5
6
METAL IMPURITY REMOVING GAS (Cl2, SoCl2, ETC)
EXHAUST
3
1
(c)
1
2
S
5
Cl_2,N_2,O_2 ETC
8
1
3
EXHAUST
(d)
1
2
5
Cl_2,N_2,O_2 ETC
8
1
3
EXHAUST

Fig.5

		SAMPLE A	SCOMPARATIVE EXAMPLE A
TRANSMISSION LOSS α_{1310}	(dB/km)	0 . 29	0 . 33
TRANSMISSION LOSS α_{1380}	(dB/km)	0 . 27	0 . 62
TRANSMISSION LOSS α_{1550}	(dB/km)	0 . 17	0 . 19
LOSS DIFFERENCE $\Delta\alpha$ (α_{1550} - α_{1310})	(dB/km)	0 . 12	0 . 14
OH-RELATED LOSS INCREASE $\Delta\alpha_{1310}$	(dB/km)	0 . 03	0 . 31
CABLE CUTOFF WAVELENGTH	(nm)	1220	
ZERO DISPERSION WAVELENGTH	(nm)	1310	
MODE FIELD DIAMETER (AT WAVELENGTH OF 1550 nm)	(μ m)	9 . 7	
BENDING LOSS (AT WAVELENGTH OF 1550 nm AND IN BENDING OF 20nm)	(dB/m)	2	

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Fig.6

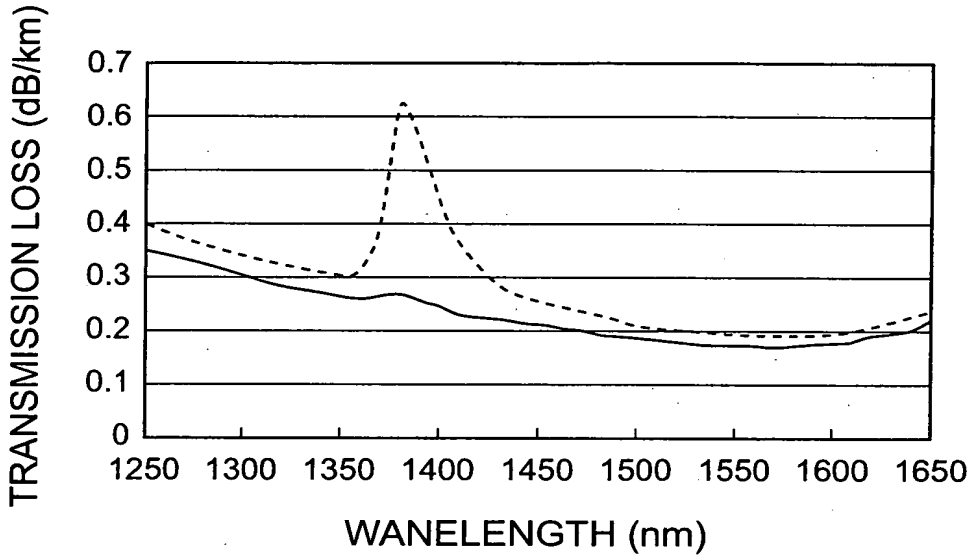
TRANSMISSION LOSS (dB/km)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1250
1300
1350
1400
1450
1500
1550
1600
1650
WANELENGTH (nm)

Fig.7

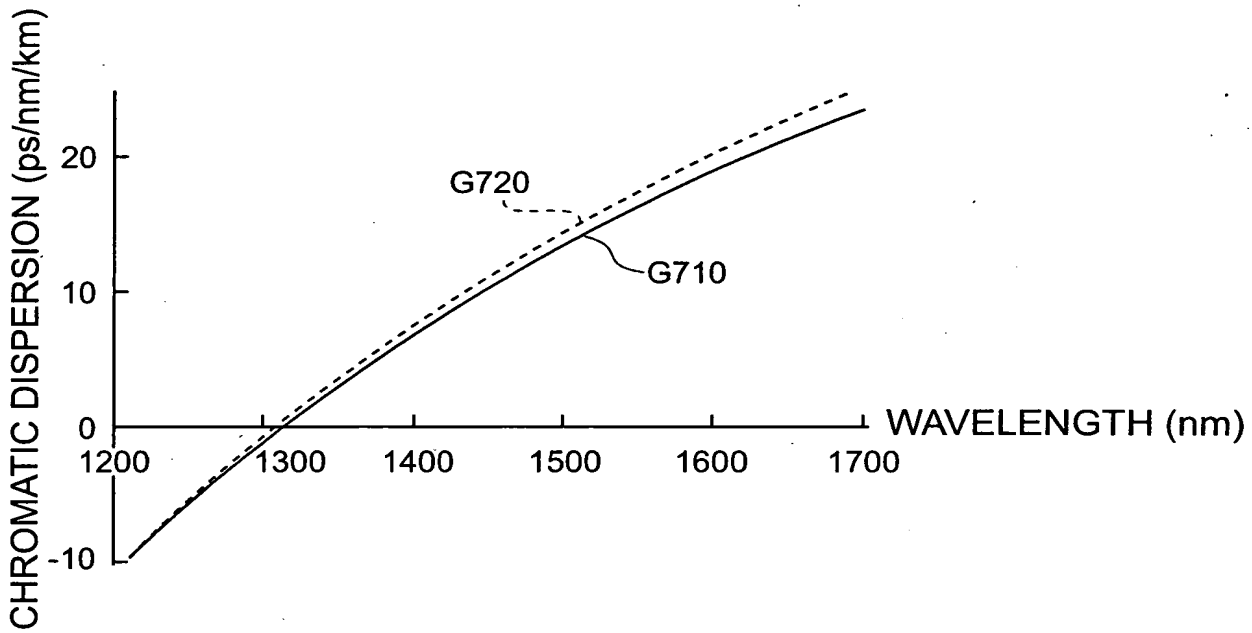
CHROMATIC DISPERSION (ps/nm/km)
20
10
0
-10
1200
1300
1400
1500
1600
1700
WAVELENGTH (nm)
G720
G710

Fig.8

	Δn (%)	2a (μm)	CABLE CUTOFF WAVE-LENGTH (nm)	MFD AT 1310nm (μm)	ZERO DISPE-RSION WAVE-LENGTH (nm)	CHRO-MATIC DISPE-RSION AT 1550 nm (ps/nm/km)	DISPE-RSION SLOPE AT 1550 nm (ps/nm²/km)	ZERO DISPE-RSION SLOPE (ps/nm²/km)	TRANS-MISSION LOSS AT 1310 nm (dB/km)	TRANS-MISSION LOSS AT 1380 nm (dB/km)	OH-RELATED LOSS INCREASE AT WAVE-LENGTH OF1380nm (dB/km)	TRANS-MISSION LOSS AT WAVE-LENGTH OF1550nm (dB/km)	FIBER STRUC-TURE (CORE MATERIAL /CLADDING MATERIAL)
SAMPLE B	0.38	7.80	1166	8.53	1318	14.97	0.0540	0.0793	≦0.32	≦0.31	≦0.10	≦0.176	PURE SILICA GLASS/ F-DOPED GLASS
SAMPLE C	0.935	8.16	1230	8.06	1313	15.46	0.0544	0.0806					
SAMPLE D	0.39	8.02	1200	8.57	1313	15.39	0.0537	0.0801					
SAMPLE E	0.395	7.56	1135	8.37	1318	14.86	0.0531	0.0789					
SAMPLE F	0.42	7.60	1260	8.33	1307	15.75	0.0536	0.0816					
SAMPLE G	0.385	8.14	1184	8.72	1312	15.90	0.0547	0.0800					
SAMPLE H	0.38	8.52	1226	8.92	1304	16.66	0.0548	0.0819					
SAMPLE B	0.36	8.10	1133	8.92	1317	15.39	0.0544	0.0790					
COMPARATIVE EXAMPLE	-	-	1158	9.13	1316	16.50	0.0584	0.0850	0.33	0.62	0.31	0.19	Ge-DOPED GLASS /PURE SILICA-GLASS

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Fig.9

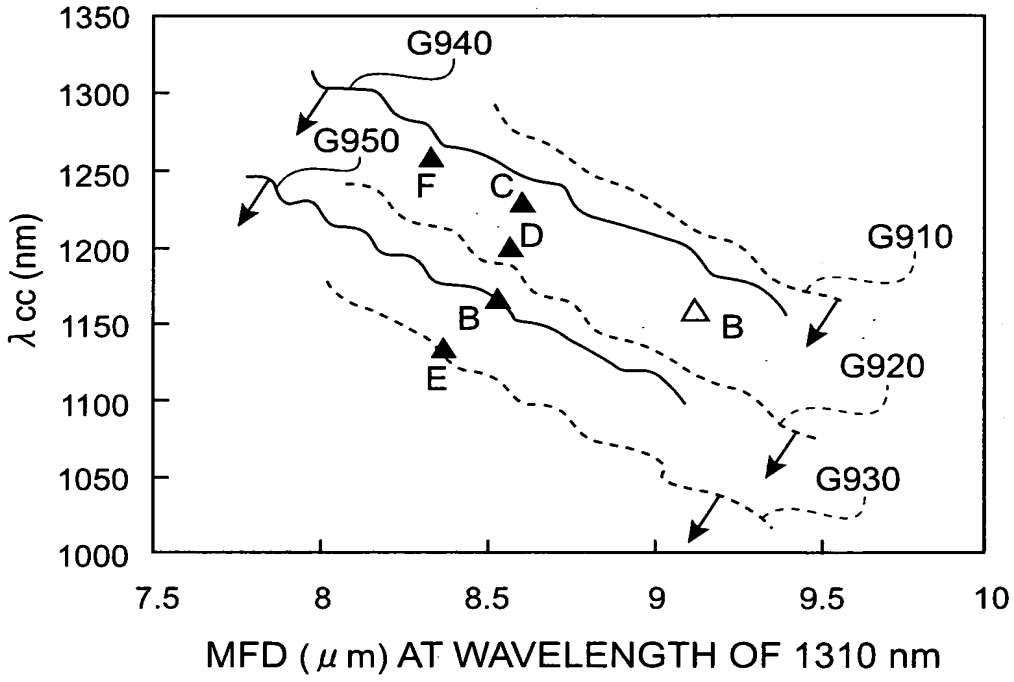
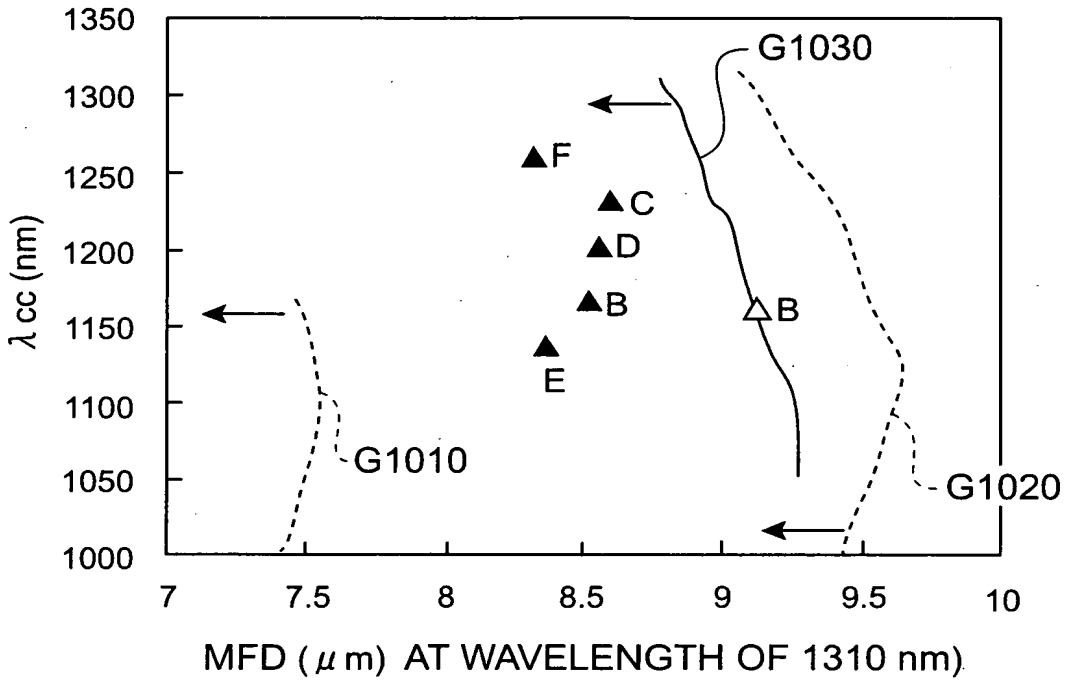

1350
1300
1250
1200
1150
1100
1050
1000
λcc (nm)
7.5
8
8.5
9
9.5
10
MFD (μm) AT WAVELENGTH OF 1310 nm
G940
G950
G910
G920
G930
F
C
D
B
B
E

Fig.10


1350
1300
1250
1200
1150
1100
1050
1000
λcc (nm)
7
7.5
8
8.5
9
9.5
10
MFD (μm) AT WAVELENGTH OF 1310 nm)
G1030
G1010
G1020
F
C
D
B
B
E